San Diego & Arizona Railway Company

TIME TABLE

To Take Effect Saturday, July 30, 1932 at 12:01 A. M.

Pacific Standard Time (120 Meridian)

For the government of employees only, and not intended for the use of the public.

The Company reserves the right to vary from this Time Table.

F. L. ANNABLE,
General Manager.

J. R. LOWE,
Superintendent.

SAN DIEGO-LAKESIDE SUBDIVISION

EASTWARD: Siding Capacity in Car Lengths	Station Numbers	Elevation	Distance from San Diego	Time Table No. 69 — July 30, 1932 — STATIONS	Distance from Lakeside	WESTWARD
Yard			1.1	ToR EIGHTH STREET	22.2	
				0.3		
	L 1		1.4	13th STREET	21.9	
				0.8		
	L 2		2.2	25th STREET	21.1	
				0.3		
			2.5	28th STREET	20.8	
				0.3		
	L 3		2.8	30th STREET	20.5	
				2.2		
13	L 5		5.0	CHOLLAS	18.3	
				0.9		
	L 6		5.9	LOWE	17.4	
				0.8		
	L 7		6.7	HOLLYDALE	16.6	
				0.5		
12	L 7A	317	7.2	ENCANTO	16.1	
				0.6		
	L 8		7.8	BEACON HILL	15.5	
				1.8		
	L 9		9.6	CONKLIN	13.7	
				0.6		
13	L 10	410	10.2	To LEMON GROVE	13.1	
				1.0		
8	L 11		11.2	QUARRY SIDING	12.1	
				0.3		
	L 12	543	11.5	SPRING VALLEY	11.8	
				0.8		
25	L 13	539	12.3	To LA MESA	11.0	
				2.3		
	L 14		14.6	FT. ROBINSON	8.7	
				0.6		
9	L 15	741	15.2	GROSSMONT	8.1	
				1.6		
19	L 17	460	16.8	To EL CAJON	6.5	
				1.8		
	L 19		18.6	WEBB	4.7	
				1.4		
25	L 20	385	20.0	SANTEE	3.3	
				2.2		
2	L 22		22.2	RIVERVIEW	1.1	
				1.1		
18	L 24	400	23.3	R LAKESIDE	0.0	
				(22.2)		

Service by extra trains only

CHULA VISTA-CORONADO SUBDIVISION

EASTWARD — Siding Capacity in Car Lengths	Station Numbers	Distance from San Diego	Time Table No. 69 — July 30, 1932 — STATIONS	Distance from Third Street (Chula Vista)	WESTWARD
	3	4.8	TWELFTH ST. (Nat'l City)	4.9	
			0.8		
	C 1	5.6	24th STREET (Nat'l City)	4.1	
			1.5		
	C 2	7.1	POTASH	2.6	
			0.5		
	C 2A	7.6	F STREET JCT.	2.1	
			0.2		
	7	7.8	CHULA VISTA JCT. (Crossing El Centro Line	1.9	
			0.7		
	C 4	8.5	CHULA VISTA	1.2	
			1.2		
	C 5	9.7	K STREET (Chula Vista)	0.0	
			(9.7)		

Service by extra trains only.

Trains operating between 12th Street, National City and 3rd Street, Chula Vista will move under yard rules.

CHULA VISTA-CORONADO SUBDIVISION

EASTWARD — Siding Capacity in Car Lengths	Station Numbers	Distance from San Diego	Time Table No. 69 — July 30, 1932 — STATIONS	Distance from North Island	WESTWARD
	C 2A	7.6	F STREET JCT.	14.9	
			0.1		
11	C 3	7.7	MARMAROSA	14.8	
			2.2		
13	C 4A	9.9	SALT WORKS	12.6	
			3.6		
13	C 8	13.5	CORONADO HEIGHTS	9.0	
			5.3		
11	C13	18.8	TENT CITY	3.7	
			2.1		
	C15	20.9	CORONADO (Ferry Landing)	1.6	
			1.6		
Yard	C17	22.5	NORTH ISLAND	0.0	
			(14.9)		

Service by extra trains only.

SAN DIEGO-EL CENTRO SUBDIVISION

EASTWARD

Siding Capacity in Car Lengths	Location of Scales, Fuel, Water, Turning and Telephone Station	SECOND CLASS 52 Imperial Valley Mixed Leave Daily	FIRST CLASS 6 Leave Daily Except Sunday and Monday T. & S. F.	4 Golden State Leave Daily Ry.	2 Leave Daily Except Monday	Station Numbers	Distance from San Diego Miles		STATIONS
		Figures shown Between San Diego and Market Street are for Information Only. Be Governed By Current Time Tables A.							
		8.40PM	7.15PM	5.15PM	12.30PM		0.0	R	SAN DIEGO
		8.44PM	7.18PM	5.18PM	12.33PM		0.4		0.4 MARKET STREET
		8.44PM	7.18PM	5.18PM	12.33PM	00	0.4		MARKET STREET
		8.45	7.19	5.19	12.34	0	0.7		0.3 FIRST STREET
Yard	KBPOWY	8.47 8.59	f 7.22	s 5.21	f 12.37	1	1.1	To-R	0.4 EIGHTH STREET
	P	9.11	f 7.30	5.28	f 12.45	3	4.8		3.7 TWELFTH STREET
14	P	f 9.21	f 7.36	f 5.34	f 12.51	7	7.4		2.6 CHULA VISTA JCT. (CROSSING C. V. I
37	P	9.25	7.39	5.37	12.54	8	9.1		1.7 BOAL
	P					9	10.6		1.5 OTAY GRAVEL PIT (Spu
20	P	f 9.29	f 7.42	f 5.40	f 12.57	10	11.1		0.5 PALM CITY
99	KP	s 9.39	s 7.50	s 5.48	s 1.05	14	15.5	To-R	4.4 SAN YSIDRO
110	PY	s 9.49	s 7.53	s 5.53	s 1.08	15	16.2		0.7 TIJUANA
30	P	f 9.54	8.00PM	f 5.57	1.15PM	18	18.5	R	2.3 AGUA CALIENTE
47	P	f 10.09		f 6.07		23	24.0		5.5 GARCIA
33		f 10.19		f 6.14		26	27.5		3.5 MATANUCA
46	PWY	f 10.47		f 6.31		35	36.6		9.1 REDONDO
41	P	11.14		6.49		44	44.9		8.3 RITA
42	P	11.25		6.56		47	48.4		3.5 LA PUERTA
31	PW	s 11.44		s 7.08		52	52.8	To-R	4.4 TECATE
22		f 12.07AM		f 7.22		58	59.6		6.8 LINDERO
16	P	12.09		7.24		59	60.3		0.7 DIVISION
67	PO	f 12.31		s 7.36		65	65.8	To	5.5 CAMPO
33	PW	**12.56**		7.49		72	71.9		6.1 CLOVER FLAT
33	P	1.15		8.03		78	78.4		6.5 PUEBLO
45	PY	s 1.35		f 8.17		84	84.5		6.1 HIPASS
10	PW	s 2.05		s 8.35		93	92.9	To	8.4 JACUMBA
37	PO	2.08		8.37		94	93.9		1.0 TITUS
19	P	f 2.33		f 8.59		100	100.7		6.8 CARRISO GORGE
				9.02		102	102.3		1.6 TUNNEL 15 SPUR
72	PW	f 3.11		f 9.29		109	109.7		7.4 DOS CABEZAS
36	P	3.41		**9.43**		117	117.7		8.0 SUGAR LOAF
85	PWOY	s **4.15**		s 9.54		122	122.5		4.8 COYOTE WELLS
62	P	f 4.40		f 10.05		130	130.0	To	7.5 PLASTER CITY
73	P	f 4.47		10.08		131	131.7		1.7 MAREA
73		f 4.58		f 10.12		134	134.4		2.7 DIXIELAND
97	P	f 5.10		f 10.20		139	139.8	To	5.4 SEELEY
34	P	5.20		10.23		141	141.6		1.8 ASPARA
15		5.27		10.29		145	145.1		3.5 WILSIE
Yard	KBPWY	s 5.35AM		s 10.35PM		148	148.1	To-R	3.0 EL CENTRO
		Arrive Daily	Arrive Daily Except Sunday and Monday	Arrive Daily	Arrive Daily Except Monday		(148.1)		
		(8.55)	(0.45)	(5.20)	(0.45)				Time Over Subdivision
		16.61	24.67	27.77	24.67				Average Speed per Hour

Time Table No. 69

July 30, 1932

All first class trains stop on signal at Agua Caliente Hotel.
No. 52 stops on signal at Mills Crossing and Girl Scout.
No. 4 stops on signal at Dubbers Spur and Girl Scout.
All race trains stop on signal at 26th Street, San Diego, and West Park Avenue.

Track No. 1 classification yard is siding for Eighth St.
First crossover switch West of San Ysidro station is initial switch for Westward trains.
Second crossover switch West of San Ysidro station is initial switch for Eastward trains.

WESTWARD TRAINS ARE SUPERIOR TO TRAINS OF THE SAME CLASS IN THE OPPOSITE DIRECTION:
Exceptions: No. 4 is superior to No. 1

SAN DIEGO-EL CENTRO SUBDIVISION

WESTWARD

Time Table No. 69

July 30, 1932

STATIONS		Distance from El Centro Miles	Elevation Feet	FIRST CLASS 3 Golden State Arrive Daily	1 Arrive Daily Except Sunday and Monday	5 Arrive Sunday Only	7 Arrive Daily Except Sunday and Monday	SECOND CLASS 51 Imperial Valley Mixed Arrive Daily
						Figures Shown Between San Diego and Market Street are for Information Only. Be Governed by Current Timetables A. T. & S. F. Ry.		
SAN DIEGO		148.1		9.00AM	5.15PM	6.20PM	11.35PM	4.50AM
0.4								
MARKET STREET		147.7		8.56AM	5.12PM	6.17PM	11.32PM	4.45AM
MARKET STREET		147.7		8.56AM	5.12PM	6.17PM	11.32PM	4.45AM
0.3								
FIRST STREET		147.4		8.55	5.11	6.16	11.31	4.43
0.4								
b-R EIGHTH STREET	KN	147.0	10	8.53	f 5.10	f 6.15	f 11.30	4.40 4.30
3.7								
TWELFTH STREET		143.3		8.45	f 5.02	f 6.08	f 11.22	4.20
2.6								
CHULA VISTA JCT. (CROSSING C. V. LINE)		140.7		f 8.39	f 4.56	f 6.02	f 11.16	f 4.11
1.7								
BOAL		139.0		8.36	4.53	5.59	11.13	4.04
1.5								
OTAY GRAVEL PIT (Spur)		137.5						
0.5								
PALM CITY		137.0	35	f 8.33	f 4.50	5.56	f 11.10	f 3.58
4.4								
b-R SAN YSIDRO	AU	132.6	100	s 8.25	s 4.42	s 5.48	s 11.02	s 3.47
0.7								
TIJUANA		131.9	100	s 8.20	s 4.37	s 5.38	s 10.57	s 3.36
2.3								
AGUA CALIENTE		129.6		f 8.15	4.30PM	5.30PM	10.50PM	f 3.30
5.5								
GARCIA		124.1	210	f 8.06				f 3.13
3.5								
MATANUCA		120.6	350	f 7.59				f 3.02
9.1								
REDONDO		111.5	765	f 7.45				f 2.38
8.3								
RITA		103.2	1315	7.30				2.16
3.5								
LA PUERTA		99.7	1590	7.24				2.07
4.4								
To-R TECATE	CA	95.3	1690	s 7.16				s 1.55
6.8								
LINDERO		88.5	2120	f 7.02				f 1.31
0.7								
DIVISION		87.8	2190					1.29
5.5								
To CAMPO	KA	82.3	2590	s 6.51				f 1.15
6.1								
CLOVER FLAT		76.2	2925	6.39				**12.56**
6.5								
PUEBLO		69.7	3425	6.27				12.35
6.1								
HIPASS		63.6	3660	f 6.16				s 12.19AM
8.4								
JACUMBA	JO	55.2	2830	s 5.52				s 11.27
1.0								
TITUS		54.2	2757	5.46				11.19
6.8								
CARRISO GORGE		47.4	2380	f 5.24				f 10.55
1.6								
TUNNEL 15 SPUR		45.8		5.17				
7.4								
DOS CABEZAS		38.4	1670	f 4.52				f 10.23
8.0								
SUGAR LOAF		30.4	790	4.29				**9.43**
4.8								
COYOTE WELLS		25.6	290	f **4.15**				s 9.03
7.5								
To PLASTER CITY	NA	18.1	40	f 4.02				f 8.25
1.7								
MAREA		16.4	27	3.59				8.20
2.7								
DIXIELAND		13.7	−10	f 3.55				f 8.14
5.4								
To SEELEY	SY	8.3	−44	f 3.47				s 8.02
1.8								
ASPARA		6.5	−46	3.42				7.56
3.5								
WILSIE		3.0	−47	3.36				7.49
3.0								
To-R EL CENTRO	CR	0.0	−49	3.30AM				7.40PM
(148.1)				Leave Daily	Leave Daily Except Sunday and Monday	Leave Sunday Only	Leave Daily Except Sunday and Monday	Leave Daily
Time Over Subdivision				(5.30)	(0.45)	(0.50)	(0.45)	(9.20)
Average Speed per Hour				26.93	24.67	22.20	24.67	15.87

WESTWARD TRAINS ARE SUPERIOR TO TRAINS OF THE SAME CLASS IN THE OPPOSITE DIRECTION:

Exceptions: No. 4 is superior to No. 1

Track No. 1 classification yard is siding for Eighth St.
First crossover switch West of San Ysidro station is initial switch for Westward trains.
Second crossover switch West of San Ysidro station is initial switch for Eastward trains.

All first class trains stop on signal at Agua Caliente Hotel.
Nos. 3 and 51 stop on signal at Mills Crossing and Girl Scout.
All race trains stop on signal at 26th Street, San Diego, and West Park Avenue.

Special Instructions

"SAFETY FIRST"

THE FOLLOWING APPLICATIONS AND ADDITIONS ARE MADE TO THE BOOK OF RULES:

STANDARD CLOCKS

1. Telegraph office and Engine house San Diego, San Ysidro and El Centro.

WATCH INSPECTORS

2. Stanley A. Pope, Manager of Time Service, San Francisco.
Leo. M. Schiller, local watch inspector, 1025 Fifth Avenue, San Diego.
R. E. Couch, local watch inspector, El Centro.
Sieglitz and Co., local watch inspectors, Calexico.

CLEARANCE CARDS

3. All trains get clearance cards as follows:
All at San Ysidro and Tecate.
All Eastward at 8th Street.

REGISTER EXCEPTIONS

4. First class trains register by registering ticket (Form 2642) at 8th Street. Trains originating and terminating at Agua Caliente only will register there.

5. Extra trains will register at San Ysidro.

GRADE CROSSINGS

6. Conductors and Brakemen, flagging crossings, will cross the tracks before signalling enginemen to proceed, and if more than one track to be crossed will remain in advance of their train until last track is reached.

7. Trains on San Diego-El Centro Subdivision will approach railroad crossing at F Street, Chula Vista, expecting to find the Main Line blocked and will pass over this crossing not to exceed 15 miles per hour.

8. At following grade crossings, trains will stop not nearer than 50 feet nor farther than 500 feet from the crossing and will proceed only on signal from flagman:
Crossing at Chula Vista Jct. except San Diego-El Centro subdivision trains which are governed by paragraph 7, Special instructions in Time Table.
San Diego Electric Railway crossing at First and Orange Street, Coronado.
San Diego Electric Railway crossing at 16th Street, San Diego.
Transfer track of San Diego Electric Railway Company, with tracks of that Company on Broadway, San Diego.

9. Trains going into Otay Gravel Pit will stop at West line of Main Ave., and not cross except when preceded by flagman with Red flag or light.

10. Trains leaving Otay Gravel Pit must be preceded by flagman over Main Ave., but will not be required to stop.

11. Trains operating at Chula Vista will stop on F Street before crossing National Ave.
At Second Ave., and at sidewalk on Third Ave., near G Street stop and be preceded by flagman.

12. Freight trains will stop and pass over crossings at Lookout Ave., La Mesa, and Magnolia Ave., Santee, only when preceded by flagman.

13. Trains using San Diego Electric Railway Company Transfer will stop before crossing tracks of that Company on F Street, San Diego.

14. Trains approaching Mount Hope cemetery west of bridge 6 will use care to avoid meeting funeral parties where road crosses track. If any should be encountered there, hold train back and allow party to cross ahead of train.

MAXIMUM SPEED OF TRAINS, EXCEPT AS OTHERWISE NOTED, IN MILES PER HOUR AS FOLLOWS:

15.

	M.P.H.
Passenger trains	50
Gas-electric trains	40
Freight trains	35
Mixed trains	30
Light engines	35
Engines 101 to 106, inclusive	35
Engines backing, coupled in train or light, main line	25
Same on branch lines	20
Trains handling locomotive crane	20
Trains handling dead or disabled engines with all rods on or with main or side rods removed	30
Same with main and side rods removed	20
All trains through sidings, main line	12
Same through sidings, branch lines	10

OTHER MAXIMUM SPEEDS IN MILES PER HOUR AS FOLLOWS:

SAN DIEGO-EL CENTRO SUBDIVISION

16.

	M.P.H.
ALL TRAINS between following points:	
Bridge 98 C and Tunnel 7, on curves	10
On Rodriguez spur	10
Tunnel No. 5 at Mile Post 96.6 and Culvert 106-B	15
Market St. and Schley St.	20
Over road crossings at 13th and 18th Sts., National City	20
Mile Post 144 and El Centro	40
PASSENGER TRAINS DESCENDING between following points:	
Redondo and Kilometer 54	35
Tecate and Mile Post 83	35
Hipass and Jacumba	35
Culvert 106-B and Coyote Wells	35
FREIGHT AND MIXED TRAINS DESCENDING between following points:	
Hipass and Jacumba	20
Culvert 106-B and Coyote Wells	20
Redondo and Kilometer 54	25
Tecate and Mile Post 83	25

SAN DIEGO-LAKESIDE SUBDIVISION

17.

SAN DIEGO-LAKESIDE SUBDIVISION ALL TRAINS:	M.P.H.
Crossing 30th Street on Commercial Street	5
Across 13th St. and National Ave.	10
Over Electric Ry. crossings at 16th St. and 25th on Commercial St.	10
Between 8th Street and 32nd Street	15
Over Horseshoe Bridge in Chollas Valley	20
Between 32nd St., San Diego and Lakeside	25
Between Riverview and Lakeside	10

CHULA VISTA-CORONADO SUBDIVISION

18.

ALL TRAINS:	M.P.H.
On F Street and on 3rd Ave., Chula Vista	10
Between One Mile East of Salt Works and Tent City	10
Between F St. Jct. and One Mile East of Salt Works	25

19. SPEED TABLE—MILES

Speed per Hour.	1 Mile in Min.	Sec.	Speed per Hour.	1 Mile in Min.	Sec.	Speed per Hour.	1 Mile in Min.	Sec.	Speed per Hour.	1 Mile in Min.	Sec.
6	10		21	2	51	31	1	56	41	1	27
8	7	30	22	2	43	32	1	52	42	1	25
10	6		23	2	36	33	1	49	43	1	23
12	5		24	2	30	34	1	45	44	1	21
15	4		25	2	24	35	1	42	45	1	20
16	3	45	26	2	18	36	1	40	46	1	18
17	3	31	27	2	13	37	1	37	47	1	16
18	3	20	28	2	8	38	1	34	48	1	15
19	3	9	29	2	4	39	1	33	49	1	13
20	3		30	2		40	1	30	50	1	12

20. SPEED TABLE—KILOMETERS

Speed Miles per Hour	1 Kilometer in Min.	Sec.	Speed Miles per Hour	1 Kilometer in Min.	Sec.	Speed Miles per Hour	1 Kilometer in Min.	Sec.	Speed Miles per Hour	1 Kilometer in Min.	Sec.
6	6	13	21	1	46	31	1	12	41	0	54
8	4	40	22	1	41	32	1	10	42	0	53
10	3	44	23	1	37	33	1	08	43	0	52
12	3	06	24	1	33	34	1	05	44	0	51
15	2	29	25	1	29	35	1	03	45	0	50
16	2	20	26	1	26	36	1	02	46	0	48
17	2	11	27	1	23	37	1	00	47	0	47
18	2	04	28	1	20	38	0	58	48	0	46
19	1	57	29	1	17	39	0	57	49	0	45
20	1	52	30	1	15	40	0	56	50	0	44

21. Rule S-72. WESTWARD TRAINS ARE SUPERIOR TO TRAINS OF THE SAME CLASS IN THE OPPOSITE DIRECTION.

22. RULE 93. Yard limits are defined by yard limit signs at the following stations:

EIGHTH STREET	SAN YSIDRO
TIJUANA	EL CENTRO

MISCELLANEOUS

23. Locomotives must not operate on Rodriguez spur beyond a point 40 ft. east of cement shed.

24. Rule 10 (H) is changed to read: "Yellow signal must be placed one-quarter mile from structure," instead of one-half mile. Green signal referred to in rule will not be used.
Rule 10 (J) is changed to read: "Slow boards will be placed one-quarter mile from structure or track," instead of one-half mile.

25. Rule 869. All brakemen will ride on top of freight and mixed trains as follows:

EASTWARD	Hipass to Jacumba Culvert 106-B to Coyote Wells.
WESTWARD, ON TRAINS OF 25 OR MORE CARS	Mile Post 83 to Tecate. Kilometer 54 to Redondo.

26. Trains will display head lights and marker lights through tunnels No. 6 to No. 20, inclusive.

27. Engine flues must not be sanded while passing places where damage from fire might result.

28. Cars must not be cut off train on grades depending on hand or air-brakes to hold them, but must be placed with the Engine.

29. Engine bell must be rung continuously between the following points:
Main line: El Centro and Seeley, through Carriso Gorge M. P. 96 to M. P. 106, 8th Street and San Ysidro.
Lakeside line: Eighth St. and Mount Hope Cemetery.

30. When a train parts while in motion due to uncoupling by reason of knuckle slipping or opening or similar causes, Conductors will personally make inspections and ascertain, if possible, the actual cause and take necessary steps to prevent a recurrence.

31. When cars are left on grades not protected with derailers they must be chained to the rail.

32. When making up through freight trains, empty and wood frame cars must be placed behind heavy loads and in rear of trains.

33. Air must be cut in when handling cars on Commercial Street between 13th and 32nd Streets.

34. Cars must not be left standing on spur or siding at Palm City nearer than 150 ft. to Palm Avenue crossing.

TRAIN AND AIR INSPECTION

35. In addition to running tests that are made after leaving terminal, inspection points, or at any point where brake pipe has been broken, to fully comply with Rule No. 16 of Air Brake rules, running test will be made on eastward passenger trains at Culvert 106B.

36. Rule 17, rear end test between terminals per "Rules and Regulations governing Care and Operation of Air Brakes and Air Signal Apparatus," will be made on all trains at Mills Crossing or Hipass.
Rear end test and train inspection will be made on Train No. 52 and all Eastward freight trains at Culvert 106-B.

37. Immediately after starting on initial trip each day, running test of hand brakes must be made on both front and rear end of Gas Electric Motor cars.

38. When helper engines are in trains, after a rear end test has been made, the leading engine must not attempt to start until the helper engine has whistled off. The helper engine must not whistle off until receiving signal from the rear, which will not be given before the air pressure on caboose gauge indicates Seventy (70) pounds.

39. Air brakes on two adjoining cars must not be cut out leaving any station where cars can be separated.

40. Following points are designated for careful inspection of freight trains: Eastward freight and mixed trains will stop not less than five minutes at Jacumba MP 114 and Coyote Wells for cooling of wheels and inspection.
Westward freight and mixed trains will stop not less than five minutes at Campo or Clover Flat and Tecate for cooling of wheels and inspection.
Eastward passenger trains will stop at Jacumba and at Coyote Wells for inspection of wheels and brakes.

41. Passenger equipment must not be switched, either in yards or on line, unless air brakes are cut in and made operative. Must not be cut off while in motion but moved to coupling or spot. Cars must not be kicked or dropped against passenger equipment, but moved to a coupling.

42. Gross tonnage of any freight train must not exceed the following number of M's per operative brake between the stations shown:

Hipass and Coyote Wells	100 M's
Hipass and Redondo	125 M's

METHOD FOR TESTING FOR TRIPLE, CAUSING UNDESIRED APPLICATION OF AIR BRAKES (DYNAMITER)

43. If test is made on a grade, a sufficient number of hand brakes must be set to secure the train.
Test must be made from rear end of train and under no circumstances by the engineman.

Special Instructions

Engineman having first been instructed by the Conductor to set his brake valve and leave it in the running position, train crew then go to rear end of train and so locate themselves that each man can observe two cars at a time, the number of cars in each test depending on the number of trainmen available. Close the angle cock on about fourth or sixth car from the rear, but do not break the air hose. One man will then go to rear of caboose, open angle cock very slowly, allowing a small flow of air to escape, about the same amount as would be released from brake valves for a service application, then close it. If all brakes apply properly and show no bad triple valve action, then open the angle cock on rear of caboose, letting out all of the air in the block of cars being tested. Close the angle cock, thus leaving block of cars empty of air in rear of train. Then proceed to the point where the angle cock had been closed on the train, leaving it closed, and close another angle cock about four or six cars ahead of this point. Then proceed with the test in the same manner as for the first block of cars in the rear, permitting the air in this block of cars to flow back to the uncharged portion. This procedure to continue until the entire train has been tested.

Air brake of car going into emergency will be cut out and report rendered on Form 2809.

After test completed and before train proceeds, rear end air brake test as per Rule 17 must be made to insure all hose coupled and angle cocks in proper position.

USE OF RETAINERS

44. All retainers on freight and passenger trains must be used: Eastward Hipass to Jacumba, Culvert 106 B to Coyote Wells. Where retainers are used, speed of freight and mixed trains on any grade of over one per cent. must not exceed 25 miles per hour; and on grades this character for the first five miles, time consumed in traveling any one mile must be not less than three minutes. This maximum speed restriction will not affect speed on heavy grade or in other locations where maximum is now provided.

INTERNATIONAL BOUNDARY

45. Trains approaching gate at International Boundary, San Ysidro, will sound one long blast of whistle to inform Government Officials of their presence. If prompt response is not gained after whistle blast, an employee will go at once to Government Headquarters and request service.

46. Trains will stop before crossing the International Boundary Line at San Ysidro. Trains in both directions when not accompanied by Customs Immigration Rider will stop at Campo. **Trains in both directions will stop at Tecate. Trains must not cross International Boundary Line without first notifying Customs and Immigration Officers and obtaining necessary permission from them.**

47. Westward trains coming into Tijuana, when not accompanied by rider, will proceed without stopping to Boundary line for inspection by Officers of the Mexican Government, after which cars for Tijuana may be set out and necessary switching performed. **Mixed trains will also stop passenger equipment at depot when passengers are handled.**

48. Trains carrying passengers will not stop between Lindero and Campo Stations except in cases of emergency.

STRUCTURES LESS THAN STANDARD CLEARANCE

SAN DIEGO-EL CENTRO SUBDIVISION

49. Rock bins, sand chute and braces for overhead conveyor Otay Gravel Pit spur.
Cement shed, west side of Rodriguez spur.

SAN DIEGO-LAKESIDE SUBDIVISION

50. Rock bins on Spring Valley crusher spur and siding.
Overhead highway bridge main line between Grossmont and El Cajon.

CHULA VISTA-CORONADO SUBDIVISION

51. Trolley wires through Tent City, Coronado.
Oil rack Pac. Cotton Seed plant, Potash.

SAN DIEGO YARDS

52. Trolley wires and pole on Fifth Avenue spur between J and L Streets.
Freight house tracks.
Fence on south side of Irwin's spur.
Union Oil Company spur tracks.

53. All employees are warned it is dangerous to stand erect on cars, especially cars of extraordinary height.

54. Trainmen must not ride on cars when switching under rock bins, Spring Valley.

55. Train and Enginemen are cautioned to watch closely for impaired clearance signs.

56. Location and Capacity of Additional Spur Tracks on San Diego-El Centro Subdivision.

Name	Connection	Distance from San Diego in Miles	Capacity
Linen	W	9.5	16 Cars
Standard	E	19.2	4 Cars
Arguello	W	20.2	4 Cars
Rodriguez	W	26.0	30 Cars
Barrett	W. & E.	67.1	16 Cars
Clover Flat Pit	W	74.4	17 Cars
Sugar Loaf Pit	W	117.1	5 Cars
Lumber	E	135.4	7 Cars
Edgar	E	137.1	11 Cars

57. ADDITIONAL STATIONS ON SAN DIEGO-EL CENTRO SUBDIVISION

Name.	Distance from San Diego.
West Park Ave.	14.2
Agua Caliente Hotel	18.1
Girl Scout	73.7
Mills Crossing	83.5
Dubbers	96.0

58. FIRE EXTINGUISHERS FOR TUNNELS AND BRIDGES.

Five-gallon fire extinguishers are located at following points:

Between Tunnels 1 and 2.
Between Tunnels 3 and 4.
West end Tunnel 5.
West end Bridge 97C.
East end Tunnel 6.
East end Tunnel 7.
East end Tunnel 8.
West end Tunnel 10.
West end Tunnel 11.
West end Tunnel 12.
East end Tunnel 13.
West end Tunnel 14.
West end Tunnel 15.
West end Tunnel 16.
East end Tunnel 17.
West end Tunnel 18.
West end Bridge 104A.
West end Bridge 104B.
West end Tunnel 19.
West end Tunnel 20.
West end Tunnel 21.

Note:—Fire extinguishers at tunnels are located just inside tunnel portals.

RATINGS OF LOCOMOTIVES

59. In M's of 1000 pounds.

Engines	Class Designation		San Diego to Redondo .9% Grade	Redondo to Hipass 1.4% Grade	El Centro to Coyote Wells .9% Grade	Coyote Wells to Hipass 2.2% Grade
10	T-57 18/24	73	971	629	971	367
12	T-57 18/24	87	1075	695	1075	400
20	T-63 21/28	128	1818	1196	1818	720
24, 25, 26, 27	T-63 21/26	140	1725	1120	1725	655
50	C-50 20/24	122	1843	1267	1843	825
101	C-57 22/30	200s	2600	1600	2600	1100
102	C-57 22/30	200s	2600	1600	2600	1100
103	C-57 22/30	194s				
104	C-57 22/30	194s	2600	1600	2600	1100
105, 106	C-57 20/30	194s				
2353, 2354	T-63 22/30	162s	2200	1450	2200	950
Allowance for empty and under-loaded cars	Less than 50 Ms.		3	3	3	3
	More than 50 Ms.		0	0	0	0

These ratings include the total weight of train, exclusive of engine and tender which the different class of locomotives will haul in each direction between the stations shown.

60. LIGHT WEIGHT OF PASSENGER CARS

	Car No.	Light Weight
Cafe-Observation	01	126,100
" "	02	125,100
" "	03	127,400
" "	04	125,700
" "	SP No. 10903	129,120
Business Cars	050	146,500
" "	051	57,800
Baggage	100	53,700
"	101	54,600
Comb. Coach-Baggage	174	136,900
" " "	175	105,200
" " "	176	114,480
" " "	177	114,180
" " "	178	115,280
Coach	200	108,900
"	201	107,900
"	202	107,800
"	203	107,600
"	204	107,700
"	205	107,800
"	206	112,500
"	207	112,400
"	208	112,300
Pullman	Wood	125,000
"	Steel Underframe	145,000
"	All Steel (Fort series)	152,000
"	All Steel (Lake series)	163,500
"	All Steel (Camp series)	159,680
"	All Steel (Rock series)	167,700

LIST OF SURGEONS AND HOSPITALS

Dr. Harry Wegeforth, Chief Surgeon, San Diego,
Office Phone: Main 8181; Res. Phone: Main 1758.

Dr. O. H. Warner, Surgeon, San Diego,
Office Phone: Main 8181; Res. Phone: H. 9336.

Dr. Molina Reyes, Surgeon, Tijuana, B. C., Mexico,
Phone: Tijuana 102-M.

Dr. J. W. Walsh, Surgeon, Jacumba,
Phone: Agent Jacumba.

Dr. Philip Hodgkin, Surgeon, El Centro.
Phone: El Centro 48.

Dr. A. L. Rice, Surgeon, Calexico.
Phone: Calexico 414. Res. Phone: Calexico 575.

W. H. Moore, Claim Agent, San Diego.
Office Phone: Main 4161. Res. Phone: Franklin 2852.

Marshall Widenor, Asst. Claim Agent, San Diego.
Office Phone: Main 4161. Res. Phone: Main 0364.

S. A. Lamey, Trainmaster and Chief Dispatcher.

LINES OF THE
SAN DIEGO & ARIZONA RY.
IN CALIFORNIA
TIJUANA & TECATE RY.
IN MEXICO

SCALE OF MILES
0 5 10 15 20 25

JUNE 1930
C.M.E.